



TANDEM FRICTIONAL ENGAGEMENT DEVICE AND AUTOMATIC TRANSMISSION MOUNTED THEREWITH

INCORPORATION BY REFERENCE

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[0001] The disclosure of Japanese Patent Application No. 2003-067234 filed on March 12, 2003 including the specification, drawings and abstract is incorporated herein by reference in its entirety.

BACKGROUND OF THE INVENTION

1. Field of the Invention

[0002] The invention relates to an improvement in a tandem frictional engagement device in which frictional engagement units such as clutches, brakes and the like are axially disposed adjacent to one another, and to an automatic transmission mounted with the tandem frictional engagement device.

2. Description of the Related Art

[0003] A great number of vehicular automatic transmissions employing a plurality of planetary gear units and frictional engagement units such as clutches, brakes, and the like have been in use. There is known a tandem frictional engagement device comprising (a) a first frictional engagement unit and (b) a second frictional engagement unit. The first frictional engagement unit couples a first coupling member to a first coupled member through a procedure wherein a friction disc that is relatively non-rotatably spline-fitted to the first coupling member is pressed by a first piston in a first direction and wherein the friction disc and another friction disc on the side of the first coupled member are clamped between the first piston and a first stopper member. The second frictional engagement unit is substantially equal in radial dimension to the first frictional engagement unit, is